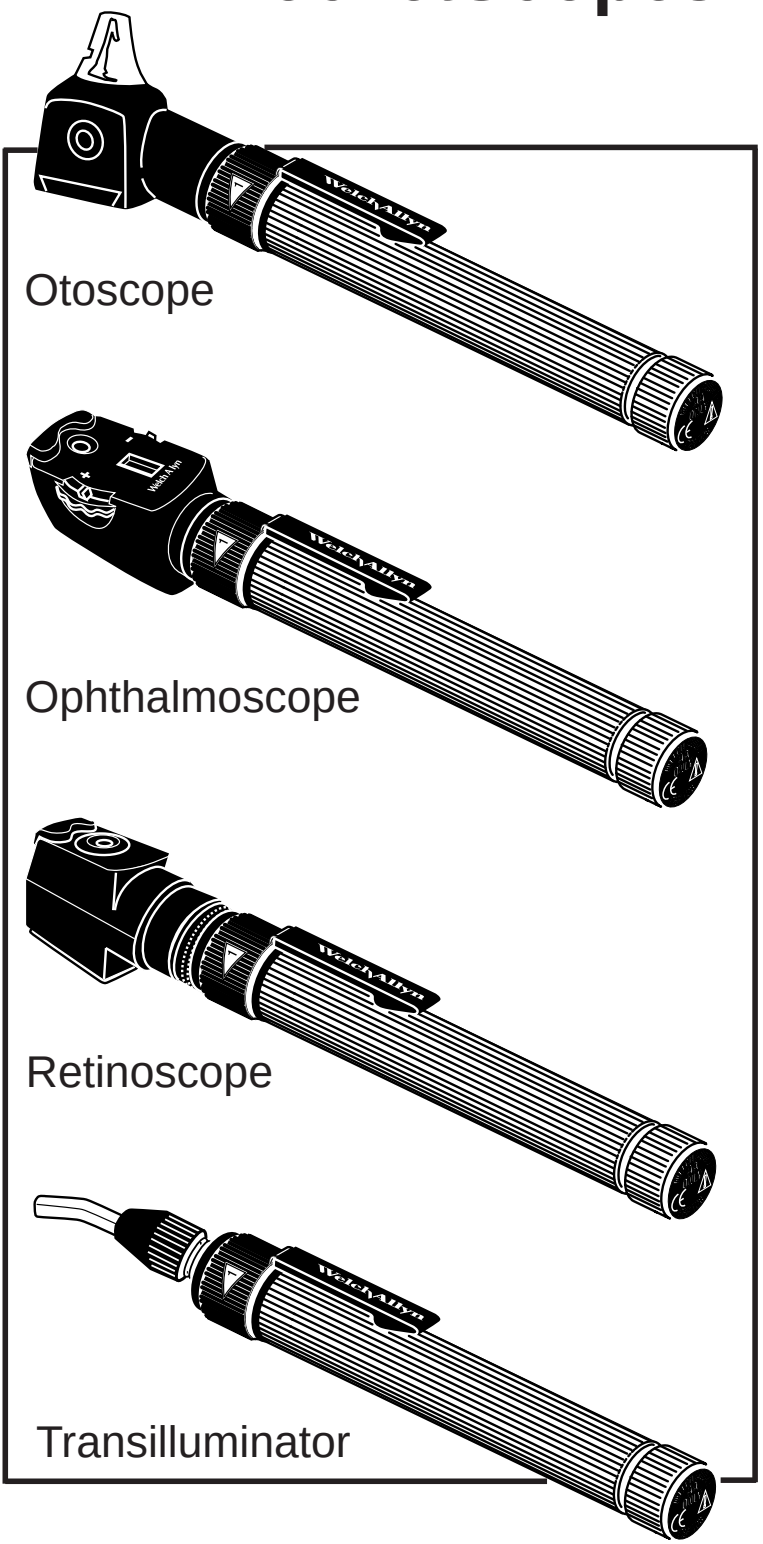
Diagnostic Instructions

Welch Allyn®

PocketScopes™



Operating Instruction Manual

Thank you for purchasing the Welch Allyn Halogen PocketScope Set. The operating and maintenance instructions found in this manual are for both the Ophthalmic and Diagnostic model sets. They should be followed to ensure many years of accurate and reliable service. Please read these instructions thoroughly before using your PocketScope.

Note:

While the handles and instrument heads of the PocketScopes are interchangeable, different lamps are required for different instrument heads. For the retinoscope use lamp No. 06200, for the ophthalmoscope No. 03900 and for the otoscope/throat illuminator and transilluminator lamp No. 03400.

For guaranteed performance, use genuine Welch Allyn lamps only.

Mode d'emploi des PocketScopes™

Merci d'avoir acheté un jeu de PocketScope™ WelchAllyn.

A la différence des poignées et des têtes, qui sont interchangeables, les lampes à utiliser sont spécifiques à chaque tête d'instrument. Veuillez consulter les diagrammes pour savoir comment remplacer les différentes lampes.

Otoscope : (p. 7)
21131 – Tête d'otoscope standard (lampe 03400)
21111 – Otoscope avec source lumineuse pour la gorge (lampe 03400). Pour convertir l'otoscope en source lumineuse pour la gorge, il suffit de dévisser la tête de l'otoscope.

Rétinoscope : (p. 6)
Pour utiliser le rétinoscope, déployez l'appareil en tirant la tête vers l'extérieur.

Le manchon de mise au point permet d'effectuer la mise au point et la rotation des stries.

Ophtalmoscope : (p. 8)
Instructions relatives aux lentilles –

Dioptries '+' - Faites pivoter le cadran de la lentille dans le sens horaire. A +6, faites de nouveau tourner le cadran de la lentille dans le sens horaire puis placez le 'multiplier lever' sur la position '+'. Faites de nouveau pivoter le cadran de la lentille dans le sens horaire si vous souhaitez atteindre les paramètres +7 à +22.

Dioptries '–' - Faites pivoter le cadran de la lentille dans le sens horaire inverse. A –9, faites de nouveau tourner le cadran de la lentille dans le sens horaire inverse. Placez ensuite le 'multiplier lever' sur la position '–'. Continuez à faire pivoter le cadran de la lentille dans le sens horaire inverse si vous souhaitez atteindre les paramètres –10 à –25.

Bedienungsanleitung für PocketScopes™

Wir bedanken uns für Ihren Kauf eines PocketScope™-Satzes von WelchAllyn.

Obwohl die Griffe und Instrumentenköpfe untereinander austauschbar sind, werden für die verschiedenen Instrumentenköpfe verschiedene Lampen benötigt. Der Lampenaustausch ist auf den diagrammatischen Abbildungen angezeigt.

Otoskop: (p. 7)
21131 – standardmäßiger Otoskopkopf (Lampe 03400)
21111 – Otoskop mit Halsbeleuchter (Lampe 03400). Zur Konversion des Otoskops in einen Halsbeleuchter wird einfach der Otoskopkopf aufgeschraubt.

Skiaskop: (p. 6)
Zur Verwendung des Skiaskops dieses zunächst teleskopisch auseinander ziehen, indem der Kopf nach außen gezogen wird.

Ein Brennpunktaufsatz ermöglicht die Scharfeinstellung und Rotation des Streifens.

Ophthalmoskop: (p. 8)
Linsenanleitung –

'+' Dioptrie – Die Linsenscheibe im Uhrzeigersinn drehen. Bei +6 die Linsenscheibe wiederum im Uhrzeigersinn drehen und dann den 'Multiplier Lever' in die Position '+' stellen. Die Linsenscheibe dann wieder im Uhrzeigersinn für +7 bis +22 drehen.

'-' Dioptrie – Die Linsenscheibe gegen den Uhrzeigersinn drehen. Bei +9 die Linsenscheibe wiederum gegen den Uhrzeigersinn drehen. Danach den 'Multiplier Lever' in die Position '-' stellen. Die Linsenscheibe dann weiter für –10 bis –25 gegen den Uhrzeigersinn drehen.

Istruzioni d'uso del PocketScopes™

Grazie per avere acquistato un set PocketScope™ WelchAllyn.

Le impugnature e le teste degli strumenti sono intercambiabili, tuttavia le teste degli strumenti richiedono l'uso di lampadine diverse. Per la sostituzione delle lampadine fare riferimento alle figure riportate qui di seguito.

Otoscopio (p. 7)
21131 – Testa standard per otoscopio (lampadina 03400)

21111 – Otoscopio con illuminatore laringeo (lampadina 03400). Per convertire l'otoscopio in illuminatore laringeo basta svitare la testa dell'otoscopio.

Retinoscopio (p. 6)
Per usare il retinoscopio estrarre la testa dello strumento.

Un apposito cilindro di focalizzazione consente di ruotare il fascio luminoso e di regolarne l'ampiezza.

Oftalmoscopio (p. 8)
Istruzioni per la regolazione della messa a fuoco.

Diottrie '+' – Ruotare il selettore della lente in senso orario. A +6 ruotare nuovamente il selettore in senso orario, quindi portare la 'multiplier lever' sulla posizione '+'. Per le diottrie comprese tra +7 e +22, ruotare ancora il selettore in senso orario.

Diottrie '-' Ruotare il selettore della lente in senso antiorario. A -9 ruotare nuovamente il selettore in senso antiorario, quindi portare la 'multiplier lever' sulla posizione '-' . Per le diottrie comprese tra -10 e -25 continuare a ruotare il selettore in senso antiorario.

Instrucciones de funcionamiento de PocketScopes™

Le agradecemos su compra del SET PocketScope™ de WelchAllyn.

Aunque los mangos y las cabezas del instrumento son intercambiables, se necesitan bombillas diferentes para las DISTINTAS cabezas del instrumento. En los diagramas se indica cómo cambiar de bombilla.

Otoscopio: (p. 7)
21131 – cabeza de otoscopio normal (bombilla 03400)
21111 – Otoscopio con iluminador de garganta (bombilla 03400). Para convertir el otoscopio en un iluminador de la garganta sólo hay que desenroscar la cabeza del otoscopio

Retinoscopio: (p. 6)
Para usar el retinoscopio, tire primero de la cabeza hacia fuera para que salga como un telescopio.

El manguito de enfoque permite enfocar y hacer girar la FRANJA.

Oftalmoscopio: (p. 8)
Instrucciones para la lente –

'+' Dioptrías - Gire el dial de la lente en sentido horario. A +6 mueva otra vez el dial de la lente en sentido horario, luego mueva la 'multiplier lever' a la posición '+'. Vuelva a mover el dial de la lente en sentido horario para +7 a +22

'-'Dioptrías – Gire el dial de la lente en sentido antihorario. A –9 mueva otra vez el dial de la lente en sentido antihorario. Luego mueva la 'multiplier lever' a la posición '-'. Siga moviendo el dial de la lente en sentido antihorario para –10 a -25

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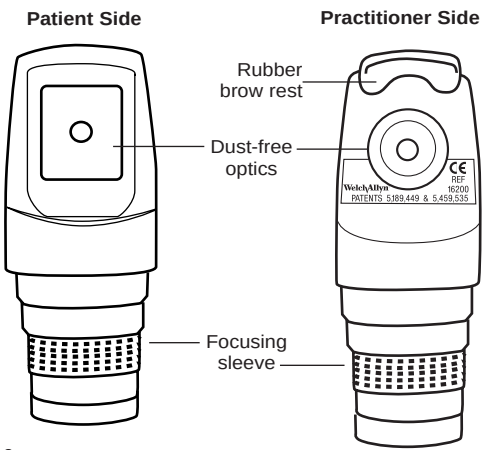
PocketScope Retinoscope

Retinoscope Features

- External focusing sleeve allows for easy adjustment regardless of what size hand or how instrument is held. Continuous 360˚ rotation.
- Dust-free optics to keep instrument clean longer.
- Fixation cards that easily attach for use during dynamic retinoscopy.
- Collapsible head for compact size.

Patents: US 5,189,449 and 5,459,535

NOTE: The retinoscope must be telescoped out by pulling in an outward direction. The retinoscope can only be used if this operation is performed.



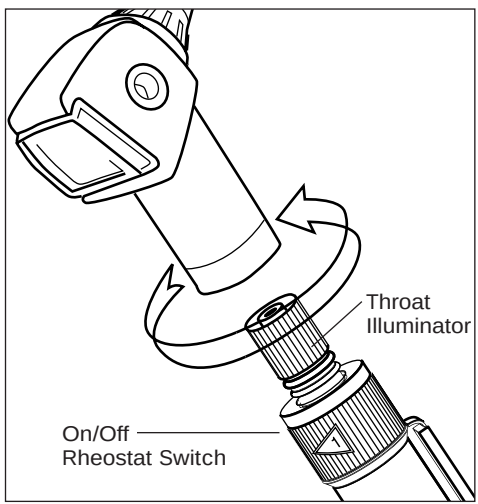
PocketScope Otoscope

Throat Illuminator (21111 only)

To convert otoscope to throat illuminator, unscrew otoscope head in counterclockwise direction.

NOTE: Illuminator section can become hot. Avoid more than momentary direct skin contact.

To turn instruments on and off, and vary intensity rotate switch at base of instrument head. As intensity increases, green band gets thicker.



PocketScope Ophthalmoscope

1. Rubber Brow Rest.
2. Aperture selection dial with continuous rotation: Allows access to microspot, small, large, fixation, slit and cobalt blue.
3. Lens Selection Dial — When used with multiplier lever, allows single diopter steps through 48 lens combinations (from +22 to –25 diopters).
4. Multiplier Lever — Allows fast movement through the range via 16 diopter shifts. When used with lens selection dial, allows single diopter steps through 48 lens combinations.
5. Two-position filter switch: Engage either open or red-free filter.
6. Larger spot size for wider field of view.
7. Sealed optics.
8. Diopter Display Window — Displays direct reading of diopter values (positive values displayed in green; negative values displayed in red).

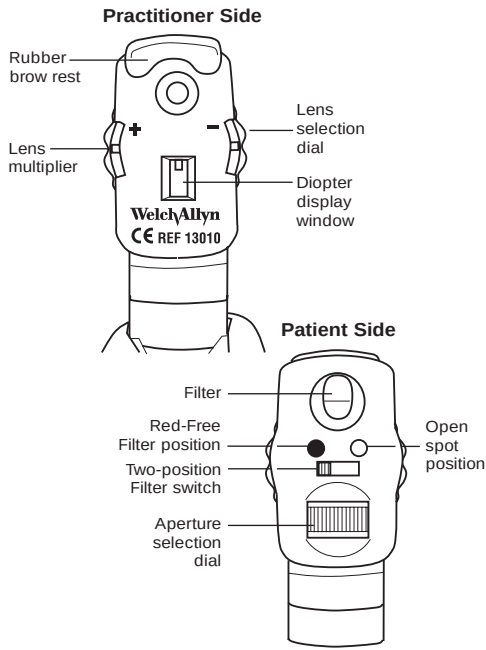
Lens Instructions:

To move through the range on the plus (+) side:

Rotate lens selection dial in positive (clockwise) direction. At +6 diopters move lens dial clockwise again. Then move multiplier lever to "+" position. Continue moving lens dial in same clockwise direction to access +7 thru +22 diopters.

To move through the range on the negative (–) side:

Rotate lens selection dial in negative (counter-clockwise) direction. At –9 diopters move lens dial counterclockwise again. Then move multiplier lever to "–" position. Continue moving lens dial in same counterclockwise direction to access –10 to –25 diopters.



PocketScope Transilluminator

Transilluminator Features

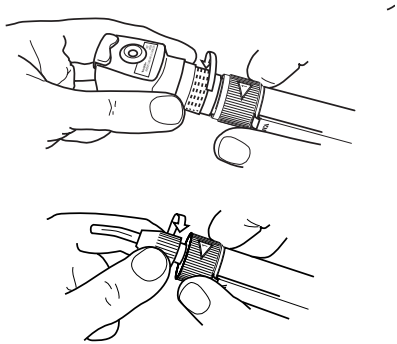
- Fiber Optic transmission for bright cool light transmission.
- Curved design to fit into tight areas.

Transilluminator Attachment

Remove the retinoscope by turning the instrument in a counterclockwise direction. This will disconnect the retinoscope. Connect the transilluminator by turning the instrument in a clockwise direction.

Light pipe can be rotated to locate optimum orientation.

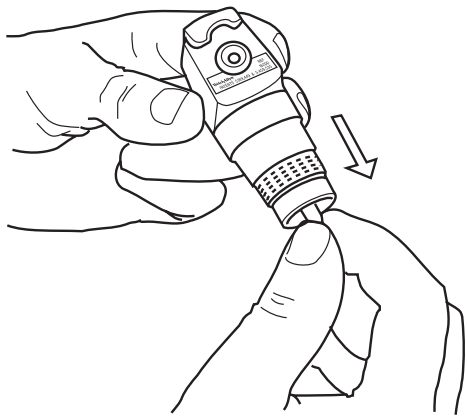
Instructions for attaching the transilluminator



Lamp Replacement

Retinoscope Lamp Replacement

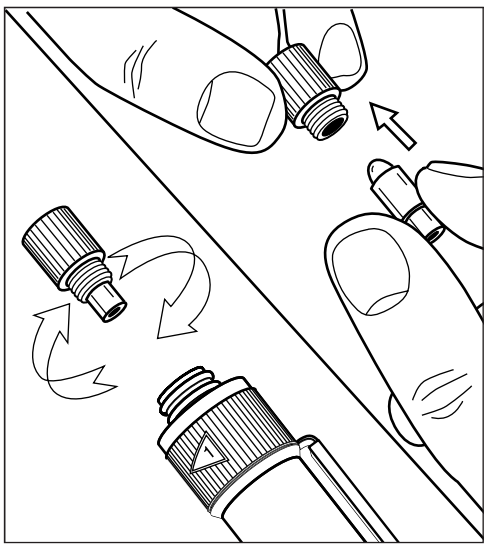
1. Remove (unscrew) retinoscope head.
2. Grasp end of lamp and pull out (use nail file or similar object if necessary).
3. Insert replacement lamp by carefully aligning pin on lamp shaft with slot in retinoscope. Push lamp in until firmly seated.



Otoscope Lamp Replacement (21111 only)

1. Remove (unscrew) otoscope head.
2. Unscrew lamp holder in counterclockwise direction and remove from handle.
3. Grasp end of lamp and pull out of holder.
4. Insert new lamp by reversing above process.

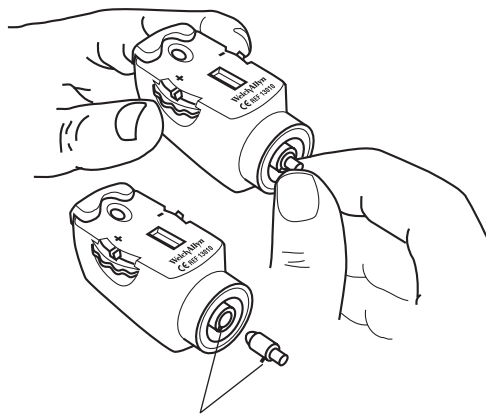
NOTE: If lamp surface is touched or becomes smudged, wipe clean with a soft cloth. This will assure longer lamp life and higher output.



Ophthalmoscope Lamp Replacement

1. Unscrew ophthalmoscope head in counter-clockwise direction.
2. Grasp end of lamp and pull out (use nail file or similar object if necessary).
3. Insert replacement lamp by carefully aligning pin on lamp shaft with slot in ophthalmoscope head. Push lamp in until firmly seated.

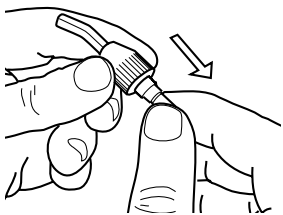
NOTE: If lamp surface is touched or becomes smudged, wipe clean with a soft cloth. This will assure longer lamp life and higher output.



Align pin to slot in ophthalmoscope head

Transilluminator Lamp Replacement

1. Place thumb on knurled ring at base of instrument. Unscrew transilluminator in a counterclockwise direction.
2. Grasp end of lamp and pull out (use nail file or similar object if needed).
3. Insert replacement lamp (No. 03400). Push lamp in firmly.



Desk/Wall Charger Installation

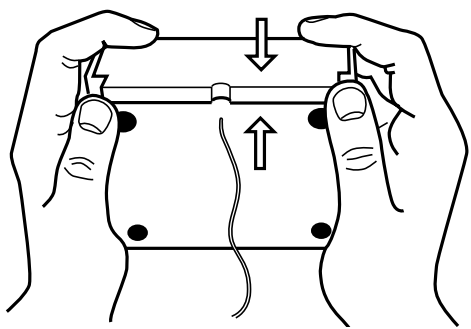
For Desk

1. Select a smooth level surface within 6 feet of a grounded electrical outlet.
2. Plug transformer into outlet.

For Wall

1. Turn charger upside down. Push back panel out slightly; then slide upward from charger base.
2. Punch or drill out two round knockouts. Panel may now be used as template.
3. Locate and level prepared back panel within 6 feet of an electrical outlet.
4. Mark the location of the two holes and drill holes to suit anchors provided: Hard materials (concrete) require larger holes (1/2 inch). Soft materials (plaster board) require smaller holes (3/16 inch).
5. Set anchors flush with the wall surface. Solid wood walls require no anchor. Thin panel walls require an anchor designed specifically for these materials.
6. Attach back panel to wall. Slide charger down in place until unit snaps into final locked position.
7. Plug transformer into outlet.

CAUTION: NOT FOR USE IN THE PRESENCE OF FLAMMABLE ANESTHETICS.



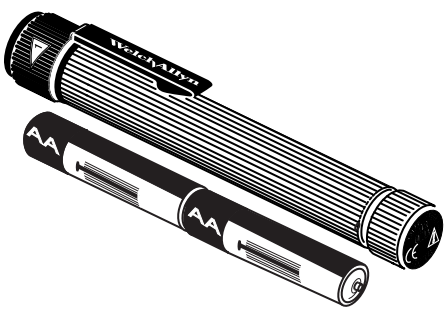
PocketScope Handles

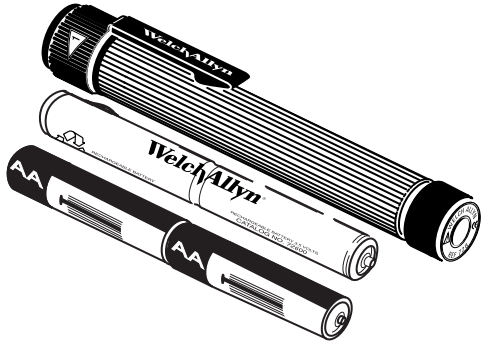
AA PocketScope Handles (72830)

1. This handle accepts any brand of AA batter ies. Use alkaline batteries for best perfmance.
2. The AA handle can be upgraded to a **convertible handle**, which allows the handle to be used with AA batteries, Welch Allyn rechargeable batteries and the PocketScope Desk Charger.

   The upgrade kit part number 72837 includes the rechargeable bottom cap (#72810) plus the rechargeable battery (#72600).

   The upgrade kit part number 72850 or 72855 includes the rechargeable bottom cap, rechargeable battery and the 792 Series Double Handle Desk Charger.





Convertible PocketScope Handles (72800)
For use with AA and Welch Allyn rechargeable batteries

This handle can be used with either AA batteries or with Welch Allyn's PocketScope rechargeable battery (#72600) and Desk Charger.

NOTE: Only use the Welch Allyn 792 Series Double-handled Desk Charger with the Welch Allyn Convertible PocketScope handle and rechargeable battery (#72600).

Batteries

Recharging Batteries (72800 only)

1. Plug charger into outlet:
   Product No. 79280 in the U.S.
   (120V, 50-60 Hz)
   Product No. 79285 outside the U.S.
   (specify country and voltage)
2. To insure full charge and long lamp life, turn instrument(s) to “off” position.
3. Insert handle(s) into charger. Green indicator lights will illuminate when handles are charging properly. **NOTE:** AA batteries will not charge and will not cause indicator lights to illuminate.

NOTE: Only Welch Allyn rechargeable battery (#72600) is approved for use with these handles.

#72600 Nickel Cadmium Rechargeable Battery

Changing Batteries

1. Remove (unscrew) bottom cap.
2. Tap handles on palm of hand until battery slides out.
3. Insert new battery:
   Rechargeable: Insert in either direction.

AA cells: Use alkaline cells for best performance. **Insert positive (+) end first for both cells.**

“AA” Cells

Recycling Batteries

Welch Allyn now employs the services of an agency which can disassemble and recycle all components of nickel-cadmium batteries so that nothing gets land-filled or incinerated. Should you wish to dispose of your expended Welch Allyn rechargeable battery via recycling (in the U.S. and Canada only), please send to:

Welch Allyn
RECYCLE BATTERY
4341 State Street Road
Skaneateles Falls, NY
13153-0220

Welch Allyn Canada
RECYCLE BATTERY
160 Matheson Blvd. East
Mississauga, Ontario
CANADA L4Z 1V4

For locations outside the U.S. and Canada, consult your local recycling authority for correct disposal of batteries.

Cleaning Recommendations

Ophthalmoscopes – Cleaning (and repair) should be performed at Welch Allyn. DO NOT apply alcohol to mirror or lenses as this may degrade optical quality.

Otoscope/Retinoscope/Transilluminator – Do not use abrasive cleaners, alcohol or other chemicals. Lens may be cleaned with warm water and soap.

Handle – The PocketScope handle wipes clean with a damp cloth.

Desk/Wall Charger – DO NOT pour water or any cleaning solution into charging wells. DO NOT autoclave Desk/Wall Charger, instruments or handles.

Replacement Parts

To order replacement parts, use these numbers:

No. 06200	Retinoscope Lamp
No. 03900	Ophthalmoscope Lamp
No. 03400	Otoscope/Transilluminator Lamp
No. 13000	Ophthalmoscope without handle
No. 16210	Retinoscope without handle
No. 42000	Transilluminator without handle
No. 21111	Otoscope/Throat Illuminator without handle
No. 21130	Otoscope without handle
No. 211024-501	Lamp and shroud assembly
No. 211005	Otoscope Lens
No. 21504	Insufflator
No. 72800	PocketScope Convertible Handle with #72600 Rechargeable Battery
No. 72801	PocketScope Convertible Handle (without battery)
No. 72830	PocketScope AA Handle with Alkaline Batteries
No. 72831	PocketScope AA Handle (without batteries)
No. 72837	Upgrade kit to convertible handle (bottom cap & rechargeable battery)
No. 72850 *(Domestic)*	Upgrade kit to convertible handle (bottom cap, rechargeable battery & desk charger)
No. 72855 *(International, specify country)*	Upgrade kit to convertible handle (bottom cap, rechargeable battery & desk charger)
No. 72600	Replacement nickel cadmium 2.5v rechargeable battery
No. 24400	Set of 4 reusable polypropylene specula (2, 3, 4, 5mm)
No. 24420	Set of 3 reusable SofSpec Specula (3, 5, 7mm)
No. 52432	Disposable specula – box of 1000 – 2.5mm pediatric size
No. 52434	Disposable specula – box of 1000 — 4mm regular size

Technical Specifications

PocketScope Desk/Wall Charger

Model	Input	Class 2	Country
79280	110-120v~ 50-60 Hz	.05A	U.S./Canada/ Japan
79282	230v~50 Hz	.012A	Europe
79284	230v~50 Hz	.012A	United Kingdom
79286	240v~50 Hz	.015A	Australia

Output – Model 72800 Rechargeable Handle used with Instrument Heads (charging rate: 45 ma) 9.0v .150a

Leakage Current – less than 10 microamps from any exposed metal part when proper ground is used.

Weight – 1 lb. 6 oz. Approx.

Dimensions – Charger H = 2½", D = 3½", W = 4½"

Transport/Storage Conditions
-40˚F (-40˚C) to 122˚F (+50˚C) 95% RH max.

Approvals

Symbols

Attention: consult manual

Type B

Type BF

Double Insulated Class 2

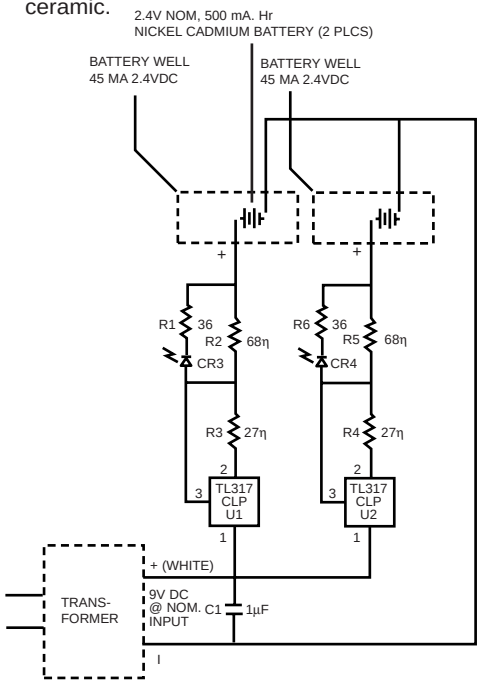
CE The mark on this device indicates it has been tested to and conforms with the provisions noted within the 93/42/EEC Medical Device Directive

Authorized European Representative

European Regulatory Manager
Welch Allyn, LTD
Kells Road, Navan
County Meath
Republic of Ireland
Tel: 353 46 28122
Fax: 353 46 28536

NOTES:

1. All resistors 1/4W., 5% carbon-film unless otherwise marked.
2. All LEDs are T-1 green.
3. All capacitors dipped monolithic ceramic.



—501 110V AC. 50-60 Hz. NOM. (shown)
—502 220V AC. 50-60 Hz. NOM. (not shown)

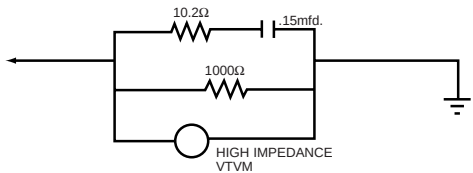
Circuit Diagram

Maintenance

Periodic electrical inspection should be performed by qualified personnel at least every six months or more often if used under adverse conditions.

Leakage Current Test:

The leakage current from any exposed metal part when a good ground connection is used should be less than 10 microamps. This is equivalent to 9.5 MV in the following circuit:



For repairs, send unit to:

Welch Allyn, Inc.
Service Department
4341 State Street Road
Skaneateles Falls,
NY 13153-0220

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